


UOC Universitat Oberta de Catalunya

 **Centre for Learning Sciences and Technologies**
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How does feedback and peer feedback affect collaborative writing in a virtual learning environment?

Teresa Guasch
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Presentation at the Open University of the Netherlands
May 31st, 2011

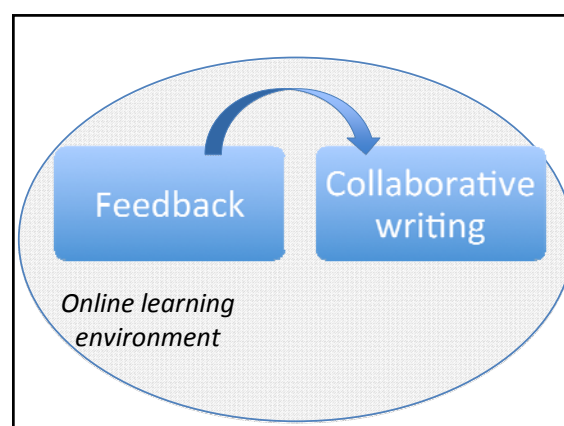
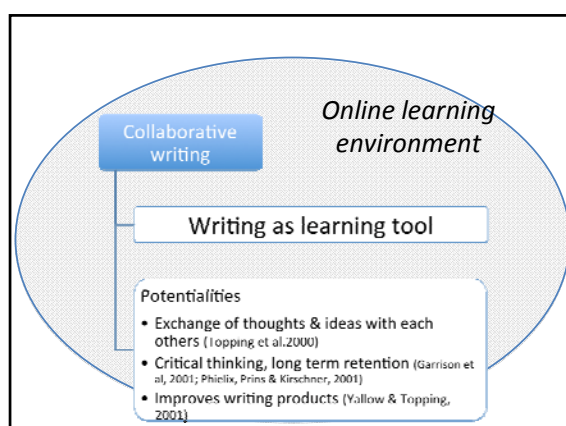
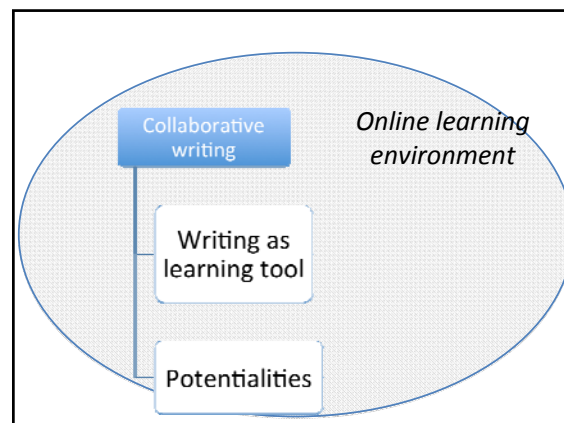
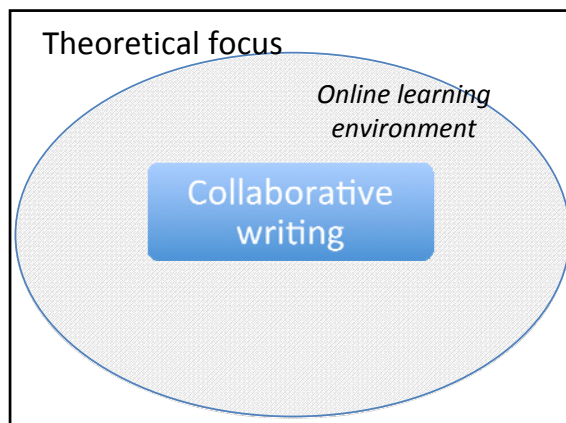
T.Guasch; A. Espasa; I. Alvarez & P. Kirschner

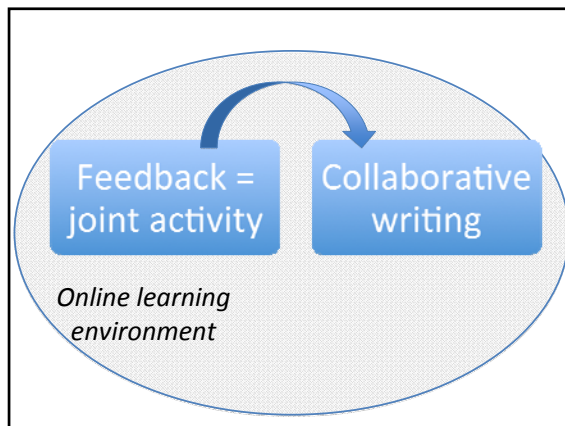
*E-feedback in Collaborative Writing processes: Development of teaching and learning competencies in online environments (Feed2learn), Ministry of Research and Innovation, Spain. (2011-2013). EDU2010-19407

Outline

1. Theoretical focus
2. Problem & Research questions of the project
3. Study 1. First results
4. Next steps

Theoretical focus

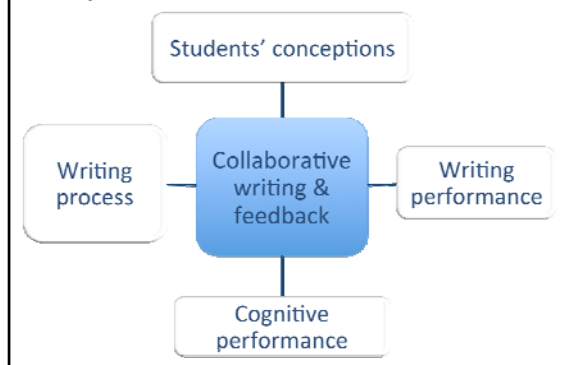




Limitations:

- Few studies on how ICT promotes the improvement of academic collaborative writing
- Not clear evidence about feedback' characteristics to contribute to learning in a writing situation in an **online learning environment**.

Project Research Questions:



Project Research Questions:

- About **students' conceptions** about **writing & FB**:
 - **How** are students' conceptions (about writing and feedback) related to writing performance in a VLE?
- About **writing product**:
 - Which kind of feedback and peer feedback contributes to improve students' writing performance in a VLE?

Project Research Questions:

- About **writing process**:
 - How does feedback affect the writing process?
 - What do students do with teacher's feedback? Which kind of changes do they make into their texts considering teacher's feedback?
 - What do the students do with peer feedback?
- About **cognitive performance**
 - How do students process feedback and peer feedback? Why?

Study 1: How does FB and peer feedback affect collaborative writing in a VLE?

- Which kind of feedback and peer feedback contributes to improve students' writing performance?
- What is the effect of an specific feedback in students' learning (conceptual knowledge and application knowledge)? And, what is the effect of a specific peer feedback?
- Which kind of feedback or peer feedback affect on students' knowledge transfer (long term effect on individual writing)?

Context

Universitat Oberta de Catalunya
(Barcelona)

- More than 50.000 students
- Fully online (virtual campus)
- Based on **written & asynchronous** communication



Participants

141 students (distributed in groups of 5 members)

Educational Psychology module (15 weeks).

Design

Pre-test 3 weeks	Intervention 4 weeks	Post-test 1	Post-test 2 4 weeks
Assessment:	4 types of FB * instructor or/and peers	Assessment:	Assessment:
-Previous knowledge	FB A: Corrective FB B: Epistemic FB C: Suggestive FB D: Epistemic + Suggestive	Test: - Conceptual Knowledge	-New writing task.
-Writing conceptions		-Application Knowledge	
-Feedback conceptions			
Individual essay	Collaborative essay		Individual essay (transference)

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Measures

- **Writing performance** (Reznitskaya et al., 2008).
 - Textual
 - Hypothetical
 - Abstract
 - Contextualised
- **Student's learning**
 - Conceptual knowledge
 - Procedural knowledge

Results

1. Descriptive results about collaboration
2. Collaborative writing performance and learning
3. Individual writing performance and learning

Descriptive results. *Collaborative activity*

1. Students participated actively in the peer feedback demand.

Number of comments:
peer feedback condition > instructor condition
2. Students cooperated between them during the essay writing process.
3. However, during the peer feedback process students distributed the task between them (no discussion and sharing comments) (Cerrato & Rodriguez, 2002; Mauri et al., 2011).
4. Students were very satisfied with the feedback and peer feedback process.

Results.

Feedback and *collaborative writing performance*

1. Significance effect of types of feedback.
2. All groups showed statistically significant improvements in the final text.
3. Groups that improved more:
 - Teacher epistemic feedback
 - Teacher FB + epistemic Peer feedback
4. Groups that improved less:
 - Teacher corrective feedback

Results.

Feedback and *writing performance*

Conditions	Before Feedback (first draft)		After Feedback (final essay)		Difference	Relative improvement
	M	SD	M	SD		%
Corrective feedback (FB)	2,52	1,38	3,79	1,34	1,27	50,40
Epistemic FB	1,83	0,38	4,67	1,27	2,84	155,19
Suggestive FB	2,15	0,97	3,60	1,39	1,45	67,44
Epistemic + Suggestive FB	2,59	1,30	4,71	0,98	2,12	81,85

First Results.

Feedback and *writing performance*

Conditions	Before feedback		After feedback		Difference	Relative improvement
	M	SD	M	SD		%
Corrective feedback (FB)	4,22	1,20	5	1	0,78	18,5
Corrective FB + peers	1,75	0,44	3,25	1,12	1,50	85,7
Epistemic FB	2	0	5,5	0,53	3,50	175
Epistemic FB + peers	1,75	0,44	4,25	1,33	2,50	142,9
Suggestive FB	1,85	0,80	4,08	1,75	2,23	120,5
Suggestive FB + peers	2,3	1,03	3,37	1,15	1,07	46,5
Epistemic + suggestive FB	3,53	1,64	5,67	0,49	2,14	60,6
Epistemic + suggestive FB + peers	2,04	0,60	4,15	0,73	2,11	103,4


[illegible]


Feedback and *individual writing* performance

- ## First Results.
- ### Feedback and *individual writing* performance
1. **Scores:** 2nd individual essay > 1st individual essay
 2. Students that improved more and also scored higher→
Epistemic feedback condition
 3. Not statistically significant relationship: Students scores in the collaborative activity and the post-test individual essay (transfer learning).
 4. Not statistically significant relationship: Students scores in the collaborative activity and the conceptual and application knowledge test.

Next steps

- Increase the **number of participants** (more groups per condition): to relate writing performance with learning
- **Writing process**
- **Cognitive performance**
- **Reduce instructors' work through writing-feedback systems**

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